

**DEPARTMENT of ENVIRONMENTAL SERVICES**  
**Water Supply & Pollution Control Division - Biology Bureau**

**LAKE TROPHIC DATA**

**MORPHOMETRIC:**

Lake: WEARE RESERVOIR	Lake Area (ha):	130.88
Town: WEARE	Maximum depth (m):	9.1
County: Hillsborough	Mean depth (m):	4.4
River Basin: Merrimack	Volume (m <sup>3</sup> ):	5750500
Latitude: 43°06'15" N	Relative depth:	0.7
Longitude: 71°47'00" W	Shore configuration:	2.29
Elevation (ft): 656	Areal water load (m/yr):	29.20
Shore length (m): 9300	Flushing rate (yr <sup>-1</sup> ):	6.60
Watershed area (ha): 7528.6	P retention coeff.:	0.44
% watershed ponded: 2.4	Lake type:	artificial

**BIOLOGICAL:**

**3 February 1992**

**30 July 1991**

DOM. PHYTOPLANKTON (% TOTAL)	#1	MELOSIRA 50%	TABELLARIA 50%
	#2	SYNURA 35%	DINOBRYON 20%
	#3		ASTERIONELLA 15%
PHYTOPLANKTON ABUNDANCE (cells/mL)			620
CHLOROPHYLL-A (µg/L)			5.48
DOM. ZOOPLANKTON (% TOTAL)	#1	ASTYLOZOON 66%	KELLICOTTIA 28%
	#2		CILIATE SPP. 15%
	#3		NAUPLIUS LARVAE 11%
ROTIFERS/LITER		11	170
MICROCRUSTACEA/LITER		6	92
ZOOPLANKTON ABUNDANCE (#/L)		50	323
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			3.5
BOTTOM DISSOLVED OXYGEN (mg/L)		7.2	0.2
BACTERIA (fecal col., #/100 ml) #1			< 10
	#2		< 10
	#3		

**SUMMER THERMAL STRATIFICATION:**

**stratified**

Depth of thermocline (m): 4.6  
Hypolimnion volume (m<sup>3</sup>): 704500  
Anoxic volume (m<sup>3</sup>): 1107000

**CHEMICAL:**

Lake: WEARE RESERVOIR

Town: WEARE

	3 February 1992		30 July 1991		
DEPTH (m)	2.0	4.0	2.0		5.5
pH (units)	6.4	6.5	6.8		6.0
A.N.C. (Alkalinity)	4.4	4.0	5.9		4.7
NITRATE NITROGEN	0.03	< 0.02	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN					
TOTAL PHOSPHORUS	0.011	0.007	0.008		0.018
CONDUCTIVITY ( $\mu$ mhos/cm)	51.5	49.3	49.7		47.1
APPARENT COLOR (cpu)	28	30	29		44
MAGNESIUM			0.62		
CALCIUM			2.8		
SODIUM			5.2		
POTASSIUM			0.51		
CHLORIDE	7	6	7		6
SULFATE	5	5	4		4
TN : TP					
CALCITE SATURATION INDEX			3.3		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1991**

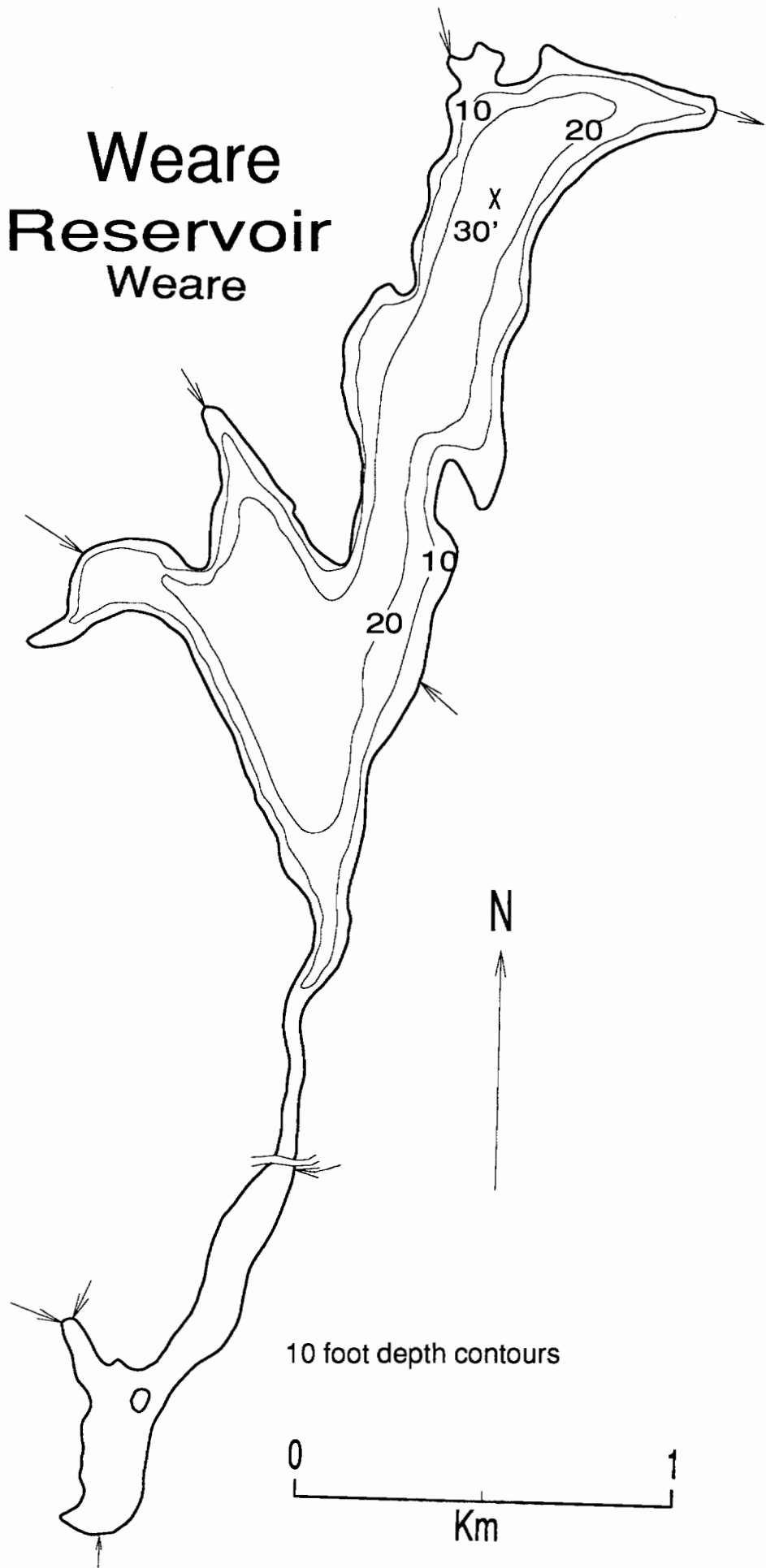
D.O. S.D. PLANT CHL TOTAL CLASS

6	2	1	1	10	Meso.
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**COMMENTS:**

1. Also known as Horace Lake.
2. This pond was previously surveyed and classified in 1979. There was no change in water quality or trophic status between the two years.
3. A paved boat ramp at Chase Park was available for a \$10.00 launching fee. A state boat ramp was present but was in poor condition and had no parking available.
4. Merismopedia (30%) was the dominant genus of wholewater plankton. Bluegreens (40%) were the dominant class.

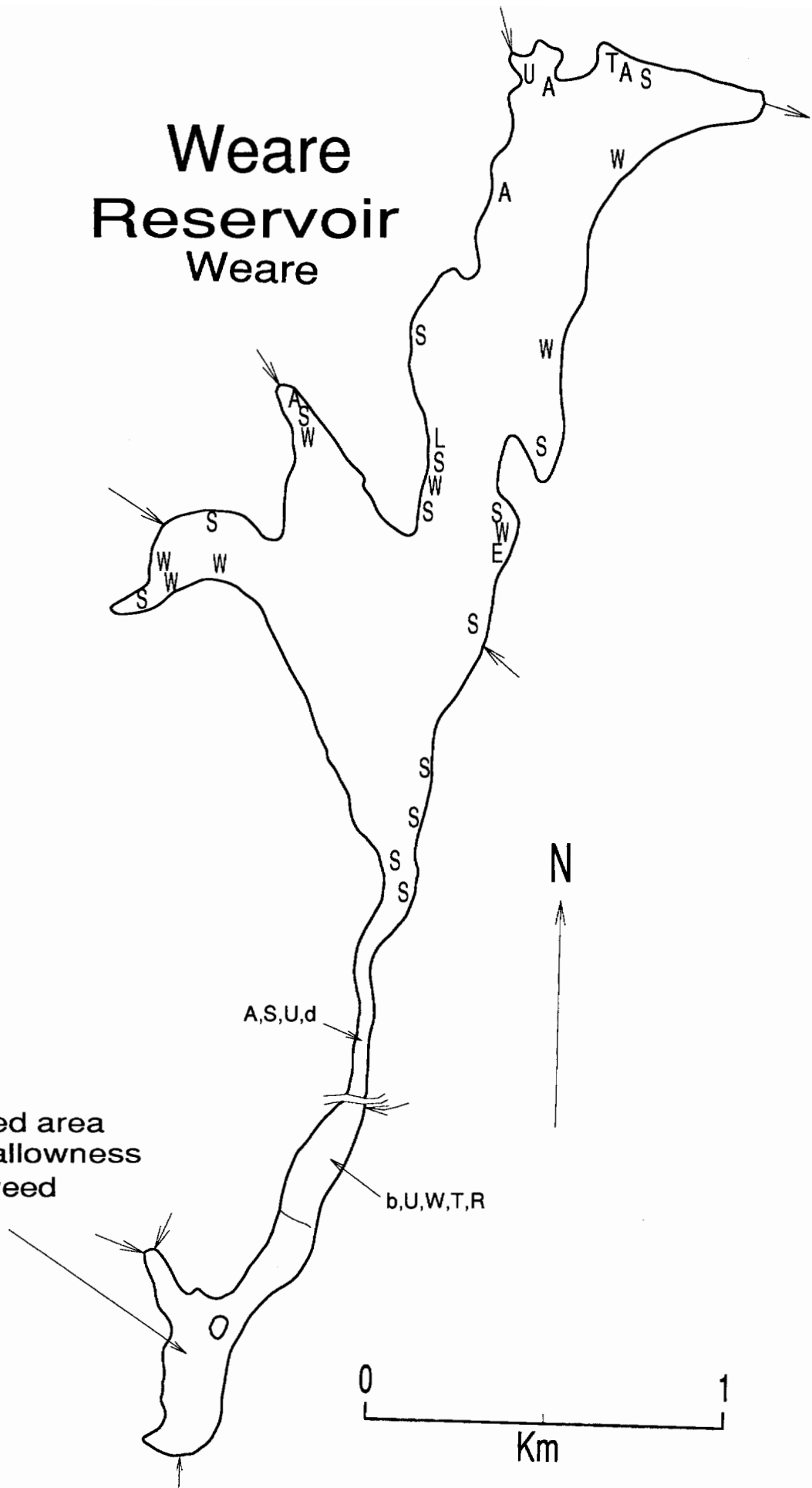
# Weare Reservoir Weare



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# Weare Reservoir Weare

Unsurveyed area  
due to shallowness  
and high weed  
density



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